

WHAT IS CLAIMED IS:

1 1. An endoscopic liquid feed device, said liquid feed device
2 including a liquid feed port provided on a casing of a manipulating
3 head assembly of an endoscope in communication with an internal
4 liquid feed passage leading to a liquid injection port opened at a fore
5 distal end portion of an insertion tube of said endoscope, and a mouth
6 piece provided fixedly at said liquid feed port for detachably connecting
7 a liquid feed adaptor to said liquid feed port at the time of feeding a
8 liquid to said liquid injection port from a pressurized liquid feed means
9 connected to said liquid feed adaptor, characterized in that:

10 said liquid feed adaptor is constituted by a Luer-Lok member
11 having a check valve member fitted on a fore end portion thereof, a
12 stopper ring provided on outer periphery of said Luer-Lok member,
13 and a nut member rotatably fitted on said Luer-Lok member and
14 axially movable between said stopper ring and a flange portion
15 provided at an outer proximal end of said Luer-Lok member;

16 said mouth piece being provided with an external male screw
17 portion on outer peripheral side thereof for threaded engagement with
18 said nut member, and formed with a Luer-Lok portion on inner

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19 peripheral side thereof, said Luer-Lok portion having a gradually
20 diminishing inside diameter in forward direction; and
21 a pressurized liquid feed means such as a syringe being
22 detachably connectible to said Luer-Lok portion of said mouth piece in
23 place of said liquid feed adaptor.

1 2. An endoscopic liquid feed device as defined in claim 1, further
2 comprising a plug member adapted to be detachably connected to said
3 mouth piece of said liquid feed port in place of said liquid feed adaptor.

1 3. An endoscopic liquid feed device as defined in claim 2,
2 wherein said plug member is formed of a resilient material and
3 constituted by a generally tubular main body portion adapted to be
4 detachably fitted on said mouth piece, a hook ring portion adapted to
5 be constantly hooked on said mouth piece, and a flexible narrow strip
6 portion connecting said hook ring portion to said main body portion.

1 4. An endoscopic liquid feed device as defined in claim 3,
2 wherein said liquid feed adaptor is arranged to be connected to said

3 mouth piece of said liquid feed port in overlapping relation with said
4 hook ring portion of said plug member.

1 5. An endoscopic liquid feed device as defined in claim 4,
2 wherein said nut member of said liquid feed adaptor is arranged to
3 seat on said hook ring portion of said plug member, causing
4 compressive deformation to said hook ring portion.

1 6. An endoscopic liquid feed device as defined in claim 1,
2 wherein said check valve member is formed of a heat-resistant resilient
3 material, and provided with a slit in a fore end face thereof.
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1 7. An endoscopic liquid feed device as defined in claim 6,
2 wherein said check valve member is formed integrally with said liquid
3 feed adaptor by insert molding.

1 8. An endoscopic liquid feed device as defined in claim 7,
2 wherein said check valve member is generally formed in a tubular

3 shape having, on front side, an outside diameter substantially same as
4 or larger than inside diameter of said Luer-Lok portion of said mouth
5 piece.

1 9. An endoscopic liquid feed device as defined in claim 1,
2 wherein said nut member and said external male screw portion on said
3 Luer-Lok portion of said mouth piece are engaged with each other
4 through multiple thread screws.

1 10. An endoscopic liquid feed device as defined in claim 1,
2 wherein said Luer-Lok member is provided with a flange portion at an
3 outer proximal end for engagement with a syringed connected thereto,
4 and said nut member is provided with an inwardly projecting rim
5 portion having an inside diameter smaller than outside diameters of
6 said flange portion and said stopper ring to prevent said nut member
7 from falling off.

1 11. An endoscopic liquid feed device as defined in claim 10,
2 wherein said stopper ring is threaded on outer periphery of said Luer-

3 Lok member and fixedly bonded to the latter by the use of an
4 adhesive.

1 12. An endoscopic liquid feed device as defined in claim 11,
2 wherein said stopper ring is engaged with a proximal end portion of
3 said mouth piece of said liquid feed port through anti-rotational
4 locking means.